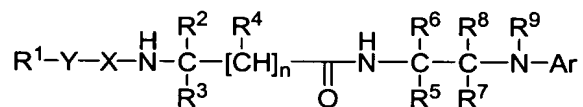


## WHAT IS CLAIMED IS:

1. A compound of Formula I:



I

or a pharmaceutically acceptable salt or prodrug thereof,

wherein:

$\text{R}^1$  is a member selected from the group consisting of H,  $\text{C}_6\text{-C}_{10}$  aryl substituted with 0-3  $\text{R}^{1a}$ , a 5- to 6-membered monocyclic or 8- to 10-membered bicyclic heteroaryl containing 1 to 4 heteroatoms each independently a member selected from the group consisting of N, O and S, wherein said heteroaryl is substituted with 0-3  $\text{R}^{1a}$ , a  $\text{C}_3\text{-C}_8$  cycloalkyl substituted with 0-2  $\text{R}^{1b}$ , wherein said  $\text{C}_3\text{-C}_8$  cycloalkyl is saturated or unsaturated; and a  $\text{C}_3\text{-C}_8$  heterocycle containing 1 to 2 heteroatoms each independently a member selected from the group consisting of N, O and S, wherein said heterocycle is substituted with 0-2  $\text{R}^{1c}$  and is saturated or unsaturated;

each  $\text{R}^{1a}$  is independently a member selected from the group consisting of H,  $\text{C}_1\text{-C}_3$  perfluoroalkyl,  $\text{C}_3\text{-C}_7$  cycloalkyl, F, Cl, Br, CN,  $\text{NO}_2$ ,  $\text{OR}^{10}$ ,  $\text{SCH}_3$ ,  $\text{S(=O)CH}_3$ ,  $\text{S(=O)}_2\text{R}^{10}$ ,  $\text{NR}^{11}\text{R}^{12}$ , acetyl,  $\text{C(=O)OR}^{13}$ ,  $\text{C(=O)NR}^{13}\text{R}^{14}$ ,  $\text{S(=O)}_2\text{NR}^{13}\text{R}^{14}$ , phenyl substituted with 0-3  $\text{R}^{15}$ , a 5- to 6-membered monocyclic heteroaryl containing 1 to 4 heteroatoms each independently a member selected from the group consisting of N, O and S, wherein said heteroaryl is substituted with 0-2  $\text{R}^{15}$ , a  $\text{C}_3\text{-C}_8$  heterocycle containing 1 to 2 heteroatoms each independently a member selected from the group consisting of N, O and S, wherein said heterocycle is substituted with 0-2  $\text{R}^{1c}$  and is saturated or unsaturated, and a  $\text{C}_1\text{-C}_4$  alkyl substituted with 0-2  $\text{R}^{16}$ ;

each  $\text{R}^{1b}$  is independently a member selected from the group consisting of H, OH, F, Cl, acetyl,  $\text{=O}$ ,  $\text{C}_1\text{-C}_6$  alkyl,  $\text{C}_1\text{-C}_6$  alkoxy,  $\text{CF}_3$  and  $\text{OCF}_3$ ;

each  $\text{R}^{1c}$  is independently a member selected from the group consisting of H, OH, F, Cl,  $\text{=O}$ ,  $\text{C}_1\text{-C}_6$  alkyl substituted with 0-2  $\text{R}^{16}$ ,  $\text{C}_1\text{-C}_6$  alkoxy,  $\text{CF}_3$ ,  $\text{OCF}_3$ ,  $\text{C(=O)R}^{10}$ ,  $\text{S(=O)}_2\text{R}^{10}$ , tBoc, Cbz; phenyl substituted with 0-3  $\text{R}^{15}$ ; a 5- to 6-membered monocyclic heteroaryl containing 1 to 4 heteroatoms each

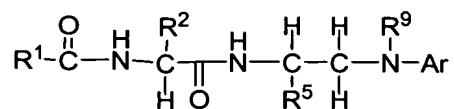
independently a member selected from the group consisting of N, O and S,  
wherein said heteroaryl is substituted with 0-2 R<sup>15</sup>;  
R<sup>2</sup> is a member selected from the group consisting of a phenyl substituted with 0-3  
R<sup>15</sup>, a 5- to 6-membered monocyclic heteroaryl containing 1 to 4 heteroatoms  
each independently a member selected from the group consisting of N, O and  
S, wherein said heteroaryl is substituted with 0-2 R<sup>15</sup>, a C<sub>1</sub>-C<sub>6</sub> alkyl substituted  
with 0-2 R<sup>2a</sup>, wherein said C<sub>1</sub>-C<sub>6</sub> alkyl optionally contains a heteroatom  
selected from the group consisting of -O-, -S-, and -S(=O)<sub>2</sub>-, a C<sub>2</sub>-C<sub>6</sub> alkenyl,  
a C<sub>2</sub>-C<sub>6</sub> alkynyl, a C<sub>3</sub>-C<sub>7</sub> cycloalkyl substituted with 0-2 R<sup>19</sup>, wherein said C<sub>3</sub>-  
C<sub>7</sub> cycloalkyl optionally contains a heteroatom selected from -O-, -S-, and -  
S(=O)<sub>2</sub>-, and a C<sub>7</sub>-C<sub>11</sub> bicycloalkyl substituted with 0-2 R<sup>19</sup>;  
each R<sup>2a</sup> is independently a member selected from the group consisting of a C<sub>6</sub>-C<sub>10</sub>  
aryl substituted with 0-3 R<sup>15</sup>, a 5- to 6-membered monocyclic or 8- to 10-  
membered bicyclic heteroaryl containing 1 to 4 heteroatoms each  
independently a member selected from the group consisting of N, O and S,  
wherein said heteroaryl is substituted with 0-3 R<sup>15</sup>, a C<sub>3</sub>-C<sub>8</sub> cycloalkyl  
substituted with 0-2 R<sup>19</sup>, and a C<sub>7</sub>-C<sub>11</sub> bicycloalkyl substituted with 0-2 R<sup>19</sup>;  
R<sup>3</sup> is a member selected from the group consisting of H and C<sub>1</sub>-C<sub>4</sub> alkyl;  
subscript n is 0 or 1;  
R<sup>4</sup> is a member selected from the group consisting of H and C<sub>1</sub>-C<sub>6</sub> alkyl;  
alternatively, R<sup>2</sup> and R<sup>4</sup> are taken together to form a C<sub>5</sub>-C<sub>7</sub> cycloalkyl substituted with  
0-2 R<sup>19</sup>;  
R<sup>5</sup> is a member selected from the group consisting of H, C<sub>3</sub>-C<sub>7</sub> cycloalkyl, C<sub>2</sub>-C<sub>6</sub>  
alkenyl, C<sub>2</sub>-C<sub>6</sub> alkyne, phenyl substituted with 0-2 R<sup>15</sup>; 5- to 6-membered  
heteroaryl containing 1 to 4 heteroatoms each independently a member  
selected from the group consisting of N, O and S, wherein said heteroaryl is  
substituted with 0-2 R<sup>15</sup>, a C<sub>1</sub>-C<sub>6</sub> alkyl substituted with 0-2 R<sup>18</sup>, wherein said  
C<sub>1</sub>-C<sub>6</sub> alkyl optionally contains a heteroatom selected from the group  
consisting of -O-, -S-, -S(=O)-, -S(=O)<sub>2</sub>- and -NR<sup>17</sup>-;  
Y is a member independently selected from the group consisting of a bond and  
-(CR<sup>20</sup>R<sup>21</sup>)<sub>m</sub>-W-(CR<sup>22</sup>R<sup>23</sup>)<sub>p</sub>-;  
subscript p is 1 or 2;  
subscript m is 0 or 1;

W is a member independently selected from the group consisting of a bond, -O-, -S-,  
 -S(=O)-, -S(=O)<sub>2</sub>- and -NR<sup>12</sup>-;  
 X is selected from the group consisting of -C(=O)-, -OC(=O)-, -NR<sup>24</sup>C(=O)- and  
 -S(=O)<sub>2</sub>-;  
 each of R<sup>6</sup>, R<sup>7</sup>, R<sup>8</sup> and R<sup>9</sup> is independently a member selected from the group  
 consisting of H and C<sub>1</sub>-C<sub>4</sub> alkyl;  
 alternatively, R<sup>5</sup> and R<sup>7</sup> are taken together to form a C<sub>5</sub>-C<sub>7</sub> cycloalkyl substituted with  
 0-2 R<sup>19</sup>;  
 alternatively, R<sup>5</sup> and R<sup>9</sup> are taken together to form a 6-7 membered heterocyclic ring  
 containing 1-2 heteroatoms each independently a member selected from the  
 group consisting of N, O and S;  
 Ar is a member selected from the group consisting of phenyl substituted with 0-3 R<sup>29</sup>,  
 and 5- to 6-membered heteroaryl containing 1 to 4 heteroatoms each  
 independently a member selected from the group consisting of N, O and S,  
 wherein said heteroaryl is substituted with 0-3 R<sup>29</sup>;  
 each R<sup>10</sup> is independently a member selected from the group consisting of H, C<sub>3</sub>-C<sub>7</sub>  
 cycloalkyl, a C<sub>1</sub>-C<sub>3</sub> perfluoroalkyl, a C<sub>1</sub>-C<sub>4</sub> alkyl substituted with 0-1 R<sup>25</sup>, a  
 phenyl substituted with 0-3 R<sup>15</sup>; a 5- to 6-membered heteroaryl containing 1 to  
 4 heteroatoms each independently a member selected from the group  
 consisting of N, O and S, wherein said heteroaryl is substituted with 0-2 R<sup>15</sup>,  
 and a C<sub>3</sub>-C<sub>8</sub> heterocycle containing 1 to 2 heteroatoms each independently a  
 member selected from the group consisting of N, O and S, wherein said  
 heterocycle is substituted with 0-2 R<sup>1c</sup>;  
 each R<sup>11</sup> is independently a member selected from the group consisting of H, 'BOC,  
 Cbz, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, (C<sub>1</sub>-C<sub>6</sub> alkyl)-C(=O)-, (C<sub>1</sub>-C<sub>6</sub> alkyl)-S(=O)<sub>2</sub>- and a  
 C<sub>1</sub>-C<sub>6</sub> alkyl;  
 each of R<sup>12</sup>, R<sup>13</sup> and R<sup>14</sup> is independently a member selected from the group  
 consisting of H and C<sub>1</sub>-C<sub>4</sub> alkyl;  
 alternatively, R<sup>13</sup> and R<sup>14</sup> on the same N atom are taken together to form a C<sub>5</sub>-C<sub>7</sub>  
 heterocycle containing 1-2 heteroatoms each independently a member selected  
 from the group consisting of N, O and S;  
 each R<sup>15</sup> is independently a member selected from the group consisting of H, OH, F,  
 Cl, Br, I, CN, NO<sub>2</sub>, COOR<sup>13</sup>, C(=O)NR<sup>13</sup>R<sup>14</sup>, S(=O)<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>, acetyl, -SCH<sub>3</sub>,

97 -S(=O)CH<sub>3</sub>, -S(=O)<sub>2</sub>CH<sub>3</sub>, NR<sup>26</sup>R<sup>27</sup>, C<sub>1</sub>-C<sub>6</sub> alkoxy, C<sub>1</sub>-C<sub>3</sub> perfluoroalkyl, C<sub>1</sub>-C<sub>3</sub>  
 98 perfluoroalkoxy and a C<sub>1</sub>-C<sub>6</sub> alkyl;  
 99 each R<sup>16</sup> is independently a member selected from the group consisting of H, OH,  
 100 COOR<sup>13</sup>, C(=O)NR<sup>13</sup>R<sup>14</sup>, S(=O)<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>, acetyl, -SCH<sub>3</sub>, -S(=O)CH<sub>3</sub>,  
 101 -S(=O)<sub>2</sub>CH<sub>3</sub>, C<sub>1</sub>-C<sub>6</sub> alkoxy, NR<sup>26</sup>R<sup>27</sup>, a phenyl substituted with 0-3 R<sup>15</sup>, a 5- to  
 102 6-membered heteroaryl containing 1 to 4 heteroatoms each independently a  
 103 member selected from the group consisting of N, O and S, wherein said  
 104 heteroaryl is substituted with 0-3 R<sup>15</sup>, and a C<sub>3</sub>-C<sub>8</sub> heterocycle containing 1 to  
 105 2 heteroatoms each independently a member selected from the group  
 106 consisting of N, O and S, wherein said heterocycle is substituted with 0-2 R<sup>15</sup>  
 107 and is saturated or unsaturated;  
 108 R<sup>17</sup> is a member selected from the group consisting of H and C<sub>1</sub>-C<sub>4</sub> alkyl;  
 109 each R<sup>18</sup> is independently a member selected from the group consisting of H, OH, F,  
 110 Cl, CN, NO<sub>2</sub>, C(=O)OR<sup>30</sup>, C(=O)NR<sup>13</sup>R<sup>14</sup>, NR<sup>11</sup>R<sup>12</sup>, a C<sub>1</sub>-C<sub>3</sub> perfluoroalkyl, a  
 111 C<sub>1</sub>-C<sub>3</sub> perfluoroalkoxy, a phenyl substituted with 0-3 R<sup>15</sup>, a 5- to 6-membered  
 112 heteroaryl containing 1 to 4 heteroatoms each independently a member  
 113 selected from the group consisting of N, O and S, wherein said heteroaryl is  
 114 substituted with 0-3 R<sup>15</sup>, a C<sub>3</sub>-C<sub>8</sub> heterocycle containing 1 to 2 heteroatoms  
 115 each independently a member selected from the group consisting of N, O and  
 116 S, wherein said heterocycle is substituted with 0-2 R<sup>15</sup> and is saturated or  
 117 unsaturated; and C<sub>3</sub>-C<sub>8</sub> cycloalkyl;  
 118 each R<sup>19</sup> is independently a member selected from the group consisting of C<sub>1</sub>-C<sub>4</sub>  
 119 alkyl, F, Cl and C<sub>1</sub>-C<sub>4</sub> alkoxy, CF<sub>3</sub> and OCF<sub>3</sub>;  
 120 alternatively, two R<sup>19</sup> on the same carbon may be combined to form C<sub>3</sub>-C<sub>6</sub> cycloalkyl;  
 121 each of R<sup>20</sup>, R<sup>21</sup>, R<sup>22</sup> and R<sup>23</sup> is independently a member selected from the group  
 122 consisting of a bond, H, F, OH, C<sub>1</sub>-C<sub>4</sub> alkyl, and C<sub>1</sub>-C<sub>3</sub> alkylhydroxy;  
 123 alternatively, R<sup>20</sup> and R<sup>21</sup> or R<sup>22</sup> and R<sup>23</sup> are taken together to form a C<sub>3</sub>-C<sub>6</sub>  
 124 cycloalkyl;  
 125 R<sup>24</sup> is a member selected from the group consisting of H and C<sub>1</sub>-C<sub>4</sub> alkyl;  
 126 each R<sup>25</sup> is independently a member selected from the group consisting of H, C<sub>3</sub>-C<sub>7</sub>  
 127 cycloalkyl, a phenyl substituted with 0-3 R<sup>15</sup> and a 5- to 6-membered  
 128 heteroaryl containing 1 to 4 heteroatoms each independently a member  
 129 selected from the group consisting of N, O and S, wherein said 5- to 6-  
 130 membered heteroaryl is substituted with 0-2 R<sup>15</sup>;

each  $R^{26}$  is independently a member selected from the group consisting of H,  $C_1$ - $C_4$  alkyl,  $(C_1$ - $C_4$  alkyl)- $C(=O)$ - and  $(C_1$ - $C_4$  alkyl)- $S(=O)_2$ -;  
 each  $R^{27}$  is independently a member selected from the group consisting of H and  $C_1$ - $C_4$  alkyl;  
 alternatively,  $R^{26}$  and  $R^{27}$  on the same N atom are taken together to form a  $C_5$ - $C_7$  heterocycle containing 1-2 heteroatoms each independently a member selected from the group consisting of N, O and S;  
 each  $R^{28}$  is independently a member selected from the group consisting of H, a  $C_1$ - $C_6$  alkyl,  $C_3$ - $C_8$  cycloalkyl, a phenyl substituted with 0-3  $R^{15}$ , a benzyl substituted with 0-2  $R^{15}$ ;  
 each  $R^{29}$  is independently a member selected from the group consisting of H, F, Cl, Br, I, CN,  $NO_2$ ,  $OR^{28}$ ,  $SR^{28}$ ,  $S(=O)R^{28}$ ,  $S(=O)_2R^{28}$ ,  $S(=O)_2NR^{13}R^{14}$ ,  $NR^{26}R^{27}$ , acetyl,  $C(=O)NR^{13}R^{14}$ ,  $C(=O)OR^{13}$ ,  $C_1$ - $C_6$  alkyl,  $OCHF_2$ ,  $SCF_3$ ,  $OCF_3$ , - $C(=NH)NH_2$ , and 5- to 6-membered heteroaryl containing 1 to 4 heteroatoms each independently a member selected from the group consisting of N, O and S;  
 alternatively, two  $R^{29}$  substituted on adjacent atoms may be combined to form a 5 to 6 membered heterocyclic fused radical, wherein said 5 to 6 membered heterocyclic fused radical comprise 1 or 2 heteroatom(s) selected from O, S and N; wherein said 5 to 6 membered heterocyclic fused radical is substituted with 0-1 oxo;  
 alternatively,  $R^{29}$  and  $R^9$  are taken together to form a 5- to 7-membered fused heterocyclic ring containing 1-2 heteroatom(s) each independently a member selected from the group consisting of N, O and S; wherein said 5 to 7 membered fused heterocyclic ring is substituted with 0-2  $R^{19}$ ;  
 each  $R^{30}$  is independently a member selected from the group consisting of H,  $C_3$ - $C_7$  cycloalkyl,  $C_1$ - $C_4$  alkyl substituted with 0-1  $R^{25}$ , a phenyl substituted with 0-3  $R^{15}$ , and a 5- to 6-membered heteroaryl containing 1 to 4 heteroatoms each independently a member selected from the group consisting of N, O and S, wherein said heteroaryl is substituted with 0-3  $R^{15}$ ; and  
 with the proviso that  $R^3$ ,  $R^4$ ,  $R^5$ ,  $R^6$ ,  $R^7$ ,  $R^8$ , and  $R^9$  are not all hydrogen.

2. The compound of claim 1, according to formula Ia



**Ia**

wherein:

R<sup>1</sup> is a 5- to 6-membered heteroaryl containing 1 to 4 heteroatoms each independently a member selected from the group consisting of N, O and S, wherein said heteroaryl is substituted with 1 R<sup>1a</sup>;

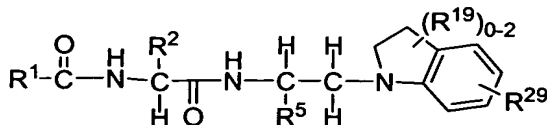
R<sup>1a</sup> is independently a member selected from the group consisting of phenyl substituted with 0-2 R<sup>15</sup>, and a 5- to 6-membered monocyclic heteroaryl containing 1 to 4 heteroatoms each independently a member selected from the group consisting of N, O and S, wherein said heteroaryl is substituted with 0-2 R<sup>15</sup>;

R<sup>2</sup> is a member selected from the group consisting of a phenyl substituted with 0-3 R<sup>15</sup>, a 5- to 6-membered monocyclic heteroaryl containing 1 to 4 heteroatoms each independently a member selected from the group consisting of N, O and S, wherein said heteroaryl is substituted with 0-2 R<sup>15</sup>, a C<sub>1</sub>-C<sub>6</sub> alkyl, a C<sub>1</sub>-C<sub>3</sub> alkyl substituted with 1 R<sup>2a</sup>, and a C<sub>3</sub>-C<sub>7</sub> cycloalkyl substituted with 0-2 R<sup>19</sup>;

each R<sup>2a</sup> is independently a member selected from the group consisting of a C<sub>6</sub>-C<sub>10</sub> aryl substituted with 0-3 R<sup>15</sup>, a 5- to 6-membered monocyclic or 8- to 10-membered bicyclic heteroaryl containing 1 to 4 heteroatoms each independently a member selected from the group consisting of N, O and S, wherein said heteroaryl is substituted with 0-3 R<sup>15</sup>, a C<sub>3</sub>-C<sub>8</sub> cycloalkyl substituted with 0-2 R<sup>19</sup> and a C<sub>7</sub>-C<sub>11</sub> bicycloalkyl substituted with 0-2 R<sup>19</sup>; and

Ar is phenyl substituted with 0-3 R<sup>29</sup>, or alternatively, R<sup>29</sup> and R<sup>9</sup> are taken together to form a 5- to 7-membered fused heterocyclic ring containing 1-2 heteroatom(s) each independently a member selected from the group consisting of N, O and S; wherein said 5- to 7-membered fused heterocyclic ring is substituted with 0-2 R<sup>19</sup>.

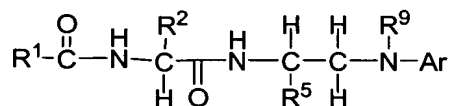
**3.** The compound of claim 2, wherein said compound is of the formula:





each R<sup>18</sup> is independently a member selected from the group consisting of H, OH, F, Cl, CN, C(=O)OR<sup>30</sup>, C(=O)NR<sup>13</sup>R<sup>14</sup>, NR<sup>11</sup>R<sup>12</sup>, a phenyl substituted with 0-3 R<sup>15</sup>, a C<sub>3</sub>-C<sub>8</sub> heterocycle containing 1 to 2 heteroatoms each independently a member selected from the group consisting of N, O and S, wherein said heterocycle is substituted with 0-2 R<sup>15</sup> and is saturated or unsaturated; and C<sub>3</sub>-C<sub>8</sub> cycloalkyl.

7. The compound of claim 1, according to formula Ia:



**Ia**

wherein:

R<sup>1</sup> is a member selected from the group consisting of a C<sub>3</sub>-C<sub>8</sub> cycloalkyl substituted with 0-2 R<sup>1b</sup>, wherein said C<sub>3</sub>-C<sub>8</sub> cycloalkyl is saturated or unsaturated and a C<sub>4</sub>-C<sub>7</sub> heterocycle containing 1 to 2 heteroatoms each independently a member selected from the group consisting of N, O and S, wherein said heterocycle is substituted with 0-2 R<sup>1c</sup> and is saturated or unsaturated;

R<sup>2</sup> is a member selected from the group consisting of a phenyl substituted with 0-3 R<sup>15</sup>, a 5- to 6-membered monocyclic heteroaryl containing 1 to 4 heteroatoms each independently a member selected from the group consisting of N, O and S, wherein said heteroaryl is substituted with 0-2 R<sup>15</sup>, a C<sub>1</sub>-C<sub>6</sub> alkyl substituted with 0-2 R<sup>2a</sup>, and a C<sub>3</sub>-C<sub>7</sub> cycloalkyl substituted with 0-2 R<sup>19</sup>; and

Ar is phenyl substituted with 0-3 R<sup>29</sup>, or alternatively, R<sup>29</sup> and R<sup>9</sup> are taken together to form a 5- to 7-membered fused heterocyclic ring containing 1-2 heteroatom(s) each independently a member selected from the group consisting of N, O and S; wherein said 5- to 7-membered fused heterocyclic ring is substituted with 0-2 R<sup>19</sup>.

8. The compound of claim 7, wherein:

R<sup>2</sup> is a member selected from the group consisting of a C<sub>1</sub>-C<sub>2</sub> alkyl substituted with 1 R<sup>2a</sup>, and C<sub>1</sub>-C<sub>6</sub> alkyl;

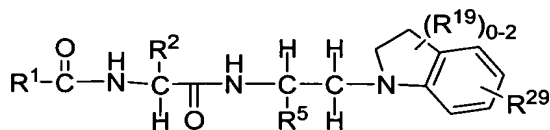
each R<sup>2a</sup> is independently a member selected from the group consisting of a phenyl substituted with 0-3 R<sup>15</sup>, and a C<sub>3</sub>-C<sub>8</sub> cycloalkyl substituted with 0-2 R<sup>19</sup>;



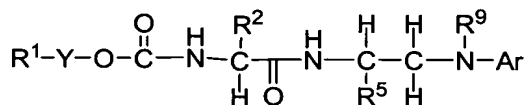
R<sup>5</sup> is a member selected from the group consisting of H, C<sub>3</sub>-C<sub>7</sub> cycloalkyl; a C<sub>1</sub>-C<sub>6</sub> alkyl substituted with 0-1 R<sup>18</sup>, wherein said C<sub>1</sub>-C<sub>6</sub> alkyl optionally contains a heteroatom selected from the group consisting of -O-, -S-, -S(=O)-, -S(=O)<sub>2</sub>- and -NR<sup>17</sup>-; and

each R<sup>18</sup> is independently a member selected from the group consisting of H, OH, F, Cl, CN, C(=O)OR<sup>30</sup>, C(=O)NR<sup>13</sup>R<sup>14</sup>, NR<sup>11</sup>R<sup>12</sup>, a phenyl substituted with 0-3 R<sup>15</sup>, a C<sub>3</sub>-C<sub>8</sub> heterocycle containing 1 to 2 heteroatoms each independently a member selected from the group consisting of N, O and S, wherein said heterocycle is substituted with 0-2 R<sup>15</sup> and is saturated or unsaturated; and C<sub>3</sub>-C<sub>8</sub> cycloalkyl.

**9.** The compound of claim 7, wherein said compound is of the formula:



**10.** The compound of claim 1, according to formula Ic:



**Ic**

wherein:

**R<sup>1</sup>** is a member selected from the group consisting of tBu, phenyl substituted with 0-2 **R<sup>15</sup>**, a 5- to 6-membered heteroaryl containing 1 to 4 heteroatoms each independently a member selected from the group consisting of N, O and S, wherein said heteroaryl is substituted with 0-2 **R<sup>15</sup>**, and a C<sub>4</sub>-C<sub>7</sub> heterocycle containing 1 to 2 heteroatoms each independently a member selected from the group consisting of N, O and S, wherein said heterocycle is substituted with 0-2 **R<sup>1c</sup>**;

each R<sup>1c</sup> is independently a member selected from the group consisting of H, OH, F, Cl, =O, C<sub>1</sub>-C<sub>6</sub> alkyl substituted with 0-2 R<sup>16</sup>, a C<sub>1</sub>-C<sub>6</sub> alkoxy, CF<sub>3</sub>, OCF<sub>3</sub>, C(=O)R<sup>10</sup>, S(=O)<sub>2</sub>R<sup>10</sup>, tBoc, Cbz, phenyl substituted with 0-3 R<sup>15</sup>, and a 5- to 6-membered monocyclic heteroaryl containing 1 to 4 heteroatoms each

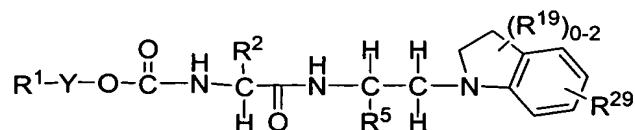
independently a member selected from the group consisting of N, O and S,  
wherein said heteroaryl is substituted with 0-2 R<sup>15</sup>;  
Y is a member independently selected from the group consisting of a bond and  
-(CR<sup>20</sup>R<sup>21</sup>)<sub>m</sub>-W-(CR<sup>22</sup>R<sup>23</sup>)<sub>p</sub>-, wherein m is 0, W is a bond, and R<sup>22</sup>R<sup>23</sup> are both  
H;  
R<sup>2</sup> is a member selected from the group consisting of a phenyl substituted with 0-3  
R<sup>15</sup>, a 5- to 6-membered monocyclic heteroaryl containing 1 to 4 heteroatoms  
each independently a member selected from the group consisting of N, O and  
S, wherein said heteroaryl is substituted with 0-2 R<sup>15</sup>, a C<sub>1</sub>-C<sub>6</sub> alkyl, a C<sub>1</sub>-C<sub>3</sub>  
alkyl substituted with 1 R<sup>2a</sup>, and a C<sub>3</sub>-C<sub>7</sub> cycloalkyl substituted with 0-2 R<sup>19</sup>;  
each R<sup>2a</sup> is independently a member selected from the group consisting of a C<sub>6</sub>-C<sub>10</sub>  
aryl substituted with 0-3 R<sup>15</sup>, a 5- to 6-membered monocyclic or 8- to 10-  
membered bicyclic heteroaryl containing 1 to 4 heteroatoms each  
independently a member selected from the group consisting of N, O and S,  
wherein said heteroaryl is substituted with 0-3 R<sup>15</sup>, a C<sub>3</sub>-C<sub>8</sub> cycloalkyl  
substituted with 0-2 R<sup>19</sup>, and a C<sub>7</sub>-C<sub>11</sub> bicycloalkyl substituted with 0-2 R<sup>19</sup>;  
and  
Ar is phenyl substituted with 0-3 R<sup>29</sup>, or alternatively, R<sup>29</sup> and R<sup>9</sup> are taken together to  
form a 5- to 7-membered fused heterocyclic ring containing 1-2 heteroatom(s)  
each independently a member selected from the group consisting of N, O and  
S; wherein said 5- to 7-membered fused heterocyclic ring is substituted with 0-  
2 R<sup>19</sup>.

11. The compound of claim 10, wherein:

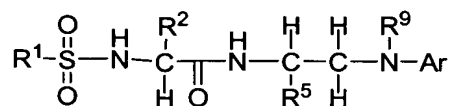
R<sup>2</sup> is a member selected from the group consisting of a C<sub>1</sub>-C<sub>2</sub> alkyl substituted with 1  
R<sup>2a</sup>, and C<sub>1</sub>-C<sub>6</sub> alkyl;  
each R<sup>2a</sup> is independently a member selected from the group consisting of a phenyl  
substituted with 0-3 R<sup>15</sup>, and a C<sub>3</sub>-C<sub>8</sub> cycloalkyl substituted with 0-2 R<sup>19</sup>;  
R<sup>5</sup> is a member selected from the group consisting of H, C<sub>3</sub>-C<sub>7</sub> cycloalkyl; a C<sub>1</sub>-C<sub>6</sub>  
alkyl substituted with 0-1 R<sup>18</sup>, wherein said C<sub>1</sub>-C<sub>6</sub> alkyl optionally contains a  
heteroatom selected from the group consisting of -O-, -S-, -S(=O)-, -S(=O)<sub>2</sub>-  
and -NR<sup>17</sup>-; and  
each R<sup>18</sup> is independently a member selected from the group consisting of H, OH, F,  
Cl, CN, C(=O)OR<sup>30</sup>, C(=O)NR<sup>13</sup>R<sup>14</sup>, NR<sup>11</sup>R<sup>12</sup>, a phenyl substituted with 0-3

$R^{15}$ , a C<sub>3</sub>-C<sub>8</sub> heterocycle containing 1 to 2 heteroatoms each independently a member selected from the group consisting of N, O and S, wherein said heterocycle is substituted with 0-2  $R^{15}$  and is saturated or unsaturated; and C<sub>3</sub>-C<sub>8</sub> cycloalkyl.

12. The compound of claim 10, wherein said compound is of the formula:



13. The compound of claim 1, according to formula Id:



**Id**

wherein:

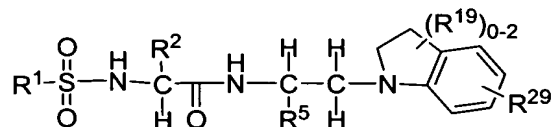
$R^1$  is a member selected from the group consisting of methyl, benzyl, C<sub>6</sub>-C<sub>10</sub> aryl substituted with 0-3  $R^{1a}$ , and a 5- to 6-membered monocyclic or 8- to 10-membered bicyclic heteroaryl containing 1 to 4 heteroatoms each independently a member selected from the group consisting of N, O and S, wherein said heteroaryl is substituted with 0-3  $R^{1a}$ ;

each  $R^{1a}$  is independently a member selected from the group consisting of H, C<sub>1</sub>-C<sub>3</sub> perfluoroalkyl, C<sub>3</sub>-C<sub>7</sub> cycloalkyl, F, Cl, Br, CN, NO<sub>2</sub>, OR<sup>10</sup>, SCH<sub>3</sub>, S(=O)CH<sub>3</sub>, S(=O)<sub>2</sub>R<sup>10</sup>, NR<sup>11</sup>R<sup>12</sup>, acetyl, C(=O)OR<sup>13</sup>, C(=O)NR<sup>13</sup>R<sup>14</sup>, S(=O)<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>, phenyl substituted with 0-3  $R^{15}$ , a 5- to 6-membered monocyclic heteroaryl containing 1 to 4 heteroatoms each independently a member selected from the group consisting of N, O and S, wherein said heteroaryl is substituted with 0-2  $R^{15}$ ; and a C<sub>1</sub>-C<sub>4</sub> alkyl; and

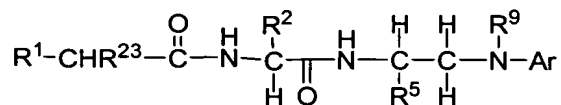
Ar is phenyl substituted with 0-3  $R^{29}$ , or alternatively,  $R^{29}$  and  $R^9$  are taken together to form a 5- to 7-membered fused heterocyclic ring containing 1-2 heteroatom(s) each independently a member selected from the group consisting of N, O and S; wherein said 5- to 7-membered fused heterocyclic ring is substituted with 0-2  $R^{19}$ .

14. The compound of claim 13, wherein:  
 $R^2$  is a member selected from the group consisting of a  $C_1$ - $C_2$  alkyl substituted with 1  $R^{2a}$ , and  $C_1$ - $C_6$  alkyl;  
each  $R^{2a}$  is independently a member selected from the group consisting of a phenyl substituted with 0-3  $R^{15}$ , and a  $C_3$ - $C_8$  cycloalkyl substituted with 0-2  $R^{19}$ ;  
 $R^5$  is a member selected from the group consisting of H,  $C_3$ - $C_7$  cycloalkyl; a  $C_1$ - $C_6$  alkyl substituted with 0-1  $R^{18}$ , wherein said  $C_1$ - $C_6$  alkyl optionally contains a heteroatom selected from the group consisting of -O-, -S-, -S(=O)-, -S(=O)<sub>2</sub>- and -NR<sup>17</sup>-; and  
each  $R^{18}$  is independently a member selected from the group consisting of H, OH, F, Cl, CN, C(=O)OR<sup>30</sup>, C(=O)NR<sup>13</sup>R<sup>14</sup>, NR<sup>11</sup>R<sup>12</sup>, a phenyl substituted with 0-3  $R^{15}$ , a  $C_3$ - $C_8$  heterocycle containing 1 to 2 heteroatoms each independently a member selected from the group consisting of N, O and S, wherein said heterocycle is substituted with 0-2  $R^{15}$  and is saturated or unsaturated; and  $C_3$ - $C_8$  cycloalkyl.

15. The compound of claim 13, wherein said compound is of the formula:



16. The compound of claim 1, according to formula Ie



Ie

wherein:

$R^1$  is a member selected from the group consisting of a  $C_6$ - $C_{10}$  aryl substituted with 0-3  $R^{1a}$ , a 5- to 6-membered monocyclic or 8- to 10-membered bicyclic heteroaryl containing 1 to 4 heteroatoms each independently a member selected from the group consisting of N, O and S, wherein said heteroaryl is substituted with 0-3  $R^{1a}$ ;  
each  $R^{1a}$  is independently a member selected from the group consisting of H,  $C_1$ - $C_3$  perfluoroalkyl,  $C_3$ - $C_7$  cycloalkyl, F, Cl, Br, CN, NO<sub>2</sub>, OR<sup>10</sup>, SCH<sub>3</sub>, S(=O)CH<sub>3</sub>,

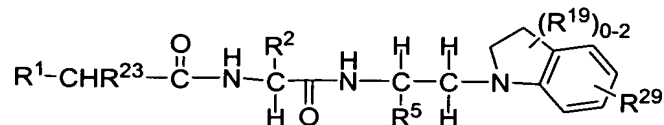
$S(=O)_2R^{10}$ ,  $NR^{11}R^{12}$ , acetyl,  $C(=O)OR^{13}$ ,  $C(=O)NR^{13}R^{14}$ ,  $S(=O)_2NR^{13}R^{14}$ ,  
 phenyl substituted with 0-3  $R^{15}$ , a 5- to 6-membered monocyclic heteroaryl  
 containing 1 to 4 heteroatoms each independently a member selected from the  
 group consisting of N, O and S, wherein said heteroaryl is substituted with 0-2  
 $R^{15}$ , a  $C_3$ - $C_8$  heterocycle containing 1 to 2 heteroatoms each independently a  
 member selected from the group consisting of N, O and S, wherein said  
 heterocycle is substituted with 0-2  $R^{1c}$  and is saturated or unsaturated, and a  
 $C_1$ - $C_4$  alkyl substituted with 0-2  $R^{16}$ ; and

Ar is phenyl substituted with 0-3  $R^{29}$ , or alternatively,  $R^{29}$  and  $R^9$  are taken together to  
 form a 5- to 7-membered fused heterocyclic ring containing 1-2 heteroatom(s)  
 each independently a member selected from the group consisting of N, O and  
 S; wherein said 5- to 7-membered fused heterocyclic ring is substituted with 0-  
 2  $R^{19}$ .

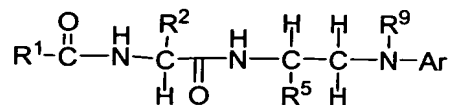
17. The compound of claim 16, wherein:

$R^2$  is a member selected from the group consisting of a  $C_1$ - $C_2$  alkyl substituted with 1  
 $R^{2a}$ , and  $C_1$ - $C_6$  alkyl;  
 each  $R^{2a}$  is independently a member selected from the group consisting of a phenyl  
 substituted with 0-3  $R^{15}$ , and a  $C_3$ - $C_8$  cycloalkyl substituted with 0-2  $R^{19}$ ; and  
 $R^5$  is a member selected from the group consisting of H,  $C_3$ - $C_7$  cycloalkyl; a  $C_1$ - $C_6$   
 alkyl, wherein said  $C_1$ - $C_6$  alkyl optionally contains a heteroatom selected from  
 the group consisting of -O-, -S-, -S(=O)-, -S(=O)<sub>2</sub>- and -NR<sup>17</sup>-.

18. The compound of claim 16, wherein said compound is of the formula:



19. The compound of claim 1, according to formula Ia

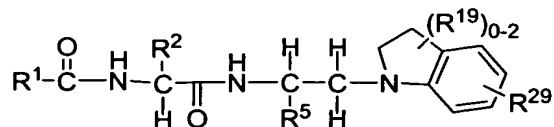


Ia

wherein:

$R^1$  is a member selected from the group consisting of  $C_6$ - $C_{10}$  aryl substituted with 0-3  $R^{1a}$ , and a 5- to 6-membered monocyclic or 8- to 10-membered bicyclic heteroaryl containing 1 to 4 heteroatoms each independently a member selected from the group consisting of N, O and S, wherein said heteroaryl is substituted with 0-3  $R^{1a}$ ;  
each  $R^{1a}$  is independently a member selected from the group consisting of H,  $C_1$ - $C_3$  perfluoroalkyl,  $C_3$ - $C_7$  cycloalkyl, F, Cl, Br, CN,  $NO_2$ ,  $OR^{10}$ ,  $SCH_3$ ,  $S(=O)CH_3$ ,  $S(=O)_2R^{10}$ ,  $NR^{11}R^{12}$ , acetyl,  $C(=O)OR^{13}$ ,  $C(=O)NR^{13}R^{14}$ ,  $S(=O)_2NR^{13}R^{14}$ , phenyl substituted with 0-3  $R^{15}$ ; and a  $C_1$ - $C_4$  alkyl substituted with 0-2  $R^{16}$ ;  
 $R^2$  is a member selected from the group consisting of a phenyl substituted with 0-3  $R^{15}$ ; a 5- to 6-membered monocyclic heteroaryl containing 1 to 4 heteroatoms each independently a member selected from the group consisting of N, O and S, wherein said heteroaryl is substituted with 0-2  $R^{15}$ , a  $C_1$ - $C_6$  alkyl, a  $C_1$ - $C_2$  alkyl substituted with 1  $R^{2a}$ , a  $C_3$ - $C_7$  cycloalkyl substituted with 0-2  $R^{19}$ ;  
each  $R^{2a}$  is independently a member selected from the group consisting of a  $C_6$ - $C_{10}$  aryl substituted with 0-3  $R^{15}$ ; a 5- to 6-membered monocyclic or 8- to 10-membered bicyclic heteroaryl containing 1 to 4 heteroatoms each independently a member selected from the group consisting of N, O and S, wherein said heteroaryl is substituted with 0-3  $R^{15}$ ; a  $C_3$ - $C_8$  cycloalkyl substituted with 0-2  $R^{19}$ ; and a  $C_7$ - $C_{11}$  bicycloalkyl substituted with 0-2  $R^{19}$ ;  
and  
Ar is phenyl substituted with 0-3  $R^{29}$ , or alternatively,  $R^{29}$  and  $R^9$  are taken together to form a 5- to 7-membered fused heterocyclic ring containing 1-2 heteroatom(s) each independently a member selected from the group consisting of N, O and S; wherein said 5- to 7-membered fused heterocyclic ring is substituted with 0-2  $R^{19}$ .

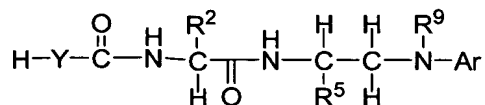
20. The compound of claim 19, wherein said compound is of the formula:



21. The compound of claim 1, wherein  $R^5$  and  $R^7$  are taken together to form a  $C_5$ - $C_7$  cycloalkyl substituted with 0-2  $R^{19}$ ; and

Ar is phenyl substituted with 0-3 R<sup>29</sup>, or alternatively, R<sup>29</sup> and R<sup>9</sup> are taken together to form a 5- to 7-membered fused heterocyclic ring containing 1-2 heteroatom(s) each independently a member selected from the group consisting of N, O and S; wherein said 5- to 7-membered fused heterocyclic ring is substituted with 0-2 R<sup>19</sup>.

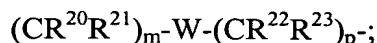
22. The compound of claim 1, according to formula If



If

wherein:

Y is a member selected from the group consisting of a bond and -



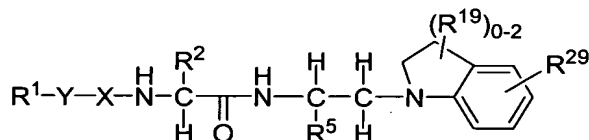
subscript p is the integer 1 or 2;

subscript m is 0 or 1;

W is a oxygen; and

Ar is phenyl substituted with 0-3 R<sup>29</sup>, or alternatively, R<sup>29</sup> and R<sup>9</sup> are taken together to form a 5- to 7-membered fused heterocyclic ring containing 1-2 heteroatom(s) each independently a member selected from the group consisting of N, O and S; wherein said 5- to 7-membered fused heterocyclic ring is substituted with 0-2 R<sup>19</sup>.

23. The compound of claim 1, according to formula Ig:



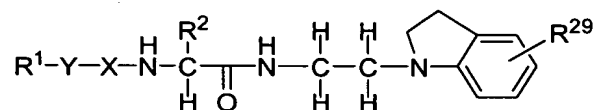
Ig

wherein:

R<sup>5</sup> is a member selected from the group consisting of H, C<sub>3</sub>-C<sub>7</sub> cycloalkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkyne, phenyl substituted with 0-2 R<sup>15</sup>; 5- to 6-membered heteroaryl containing 1 to 4 heteroatoms each independently a member selected from the group consisting of N, O and S, wherein said heteroaryl is substituted with 0-2 R<sup>15</sup>, a C<sub>1</sub>-C<sub>6</sub> alkyl substituted with 0-2 R<sup>18</sup>, wherein said

C<sub>1</sub>-C<sub>6</sub> alkyl optionally contains a heteroatom selected from the group consisting of -O-, -S-, -S(=O)-, -S(=O)<sub>2</sub>- and -NR<sup>17</sup>-.

24. The compound of claim 23, according to formula Ih:



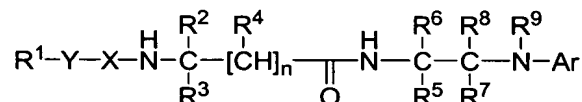
Ih

25. The compound of claim 1, wherein R<sup>9</sup> is H; and

Ar is phenyl substituted with 0-3 R<sup>29</sup>, or alternatively, R<sup>29</sup> and R<sup>9</sup> are taken together to form a 5- to 7-membered fused heterocyclic ring containing 1-2 heteroatom(s) each independently a member selected from the group consisting of N, O and S; wherein said 5- to 7-membered fused heterocyclic ring is substituted with 0-2 R<sup>19</sup>.

26. The compound of claim 1, wherein said compound is a member selected from the compounds of Table I.

27. A pharmaceutical composition comprising: a compound of Formula I:



I

or a pharmaceutically acceptable salt or prodrug thereof,

wherein:

R<sup>1</sup> is a member selected from the group consisting of H, C<sub>6</sub>-C<sub>10</sub> aryl substituted with 0-3 R<sup>1a</sup>, a 5- to 6-membered monocyclic or 8- to 10-membered bicyclic heteroaryl containing 1 to 4 heteroatoms each independently a member selected from the group consisting of N, O and S, wherein said heteroaryl is substituted with 0-3 R<sup>1a</sup>, a C<sub>3</sub>-C<sub>8</sub> cycloalkyl substituted with 0-2 R<sup>1b</sup>, wherein said C<sub>3</sub>-C<sub>8</sub> cycloalkyl is saturated or unsaturated; and a C<sub>3</sub>-C<sub>8</sub> heterocycle containing 1 to 2 heteroatoms each independently a member selected from the group consisting of N, O and S, wherein said heterocycle is substituted with 0-2 R<sup>1c</sup> and is saturated or unsaturated;

each R<sup>1a</sup> is independently a member selected from the group consisting of H, C<sub>1</sub>-C<sub>3</sub> perfluoroalkyl, C<sub>3</sub>-C<sub>7</sub> cycloalkyl, F, Cl, Br, CN, NO<sub>2</sub>, OR<sup>10</sup>, SCH<sub>3</sub>, S(=O)CH<sub>3</sub>,



$S(=O)_2R^{10}$ ,  $NR^{11}R^{12}$ , acetyl,  $C(=O)OR^{13}$ ,  $C(=O)NR^{13}R^{14}$ ,  $S(=O)_2NR^{13}R^{14}$ ,  
 phenyl substituted with 0-3  $R^{15}$ , a 5- to 6-membered monocyclic heteroaryl  
 containing 1 to 4 heteroatoms each independently a member selected from the  
 group consisting of N, O and S, wherein said heteroaryl is substituted with 0-2  
 $R^{15}$ , a  $C_3$ - $C_8$  heterocycle containing 1 to 2 heteroatoms each independently a  
 member selected from the group consisting of N, O and S, wherein said  
 heterocycle is substituted with 0-2  $R^{1c}$  and is saturated or unsaturated, and a  
 $C_1$ - $C_4$  alkyl substituted with 0-2  $R^{16}$ ;  
 each  $R^{1b}$  is independently a member selected from the group consisting of H, OH, F,  
 Cl, acetyl,  $=O$ ,  $C_1$ - $C_6$  alkyl,  $C_1$ - $C_6$  alkoxy,  $CF_3$  and  $OCF_3$ ;  
 each  $R^{1c}$  is independently a member selected from the group consisting of H, OH, F,  
 Cl,  $=O$ ,  $C_1$ - $C_6$  alkyl substituted with 0-2  $R^{16}$ ,  $C_1$ - $C_6$  alkoxy,  $CF_3$ ,  $OCF_3$ ,  
 $C(=O)R^{10}$ ,  $S(=O)_2R^{10}$ , tBoc, Cbz; phenyl substituted with 0-3  $R^{15}$ ; a 5- to 6-  
 membered monocyclic heteroaryl containing 1 to 4 heteroatoms each  
 independently a member selected from the group consisting of N, O and S,  
 wherein said heteroaryl is substituted with 0-2  $R^{15}$ ;  
 $R^2$  is a member selected from the group consisting of a phenyl substituted with 0-3  
 $R^{15}$ , a 5- to 6-membered monocyclic heteroaryl containing 1 to 4 heteroatoms  
 each independently a member selected from the group consisting of N, O and  
 S, wherein said heteroaryl is substituted with 0-2  $R^{15}$ , a  $C_1$ - $C_6$  alkyl substituted  
 with 0-2  $R^{2a}$ , wherein said  $C_1$ - $C_6$  alkyl optionally contains a heteroatom  
 selected from the group consisting of  $-O-$ ,  $-S-$ , and  $-S(=O)_2-$ , a  $C_2$ - $C_6$  alkenyl,  
 a  $C_2$ - $C_6$  alkynyl, a  $C_3$ - $C_7$  cycloalkyl substituted with 0-2  $R^{19}$ , wherein said  $C_3$ -  
 $C_7$  cycloalkyl optionally contains a heteroatom selected from  $-O-$ ,  $-S-$ , and  $-$   
 $S(=O)_2-$ , and a  $C_7$ - $C_{11}$  bicycloalkyl substituted with 0-2  $R^{19}$ ;  
 each  $R^{2a}$  is independently a member selected from the group consisting of a  $C_6$ - $C_{10}$   
 aryl substituted with 0-3  $R^{15}$ , a 5- to 6-membered monocyclic or 8- to 10-  
 membered bicyclic heteroaryl containing 1 to 4 heteroatoms each  
 independently a member selected from the group consisting of N, O and S,  
 wherein said heteroaryl is substituted with 0-3  $R^{15}$ , a  $C_3$ - $C_8$  cycloalkyl  
 substituted with 0-2  $R^{19}$ , and a  $C_7$ - $C_{11}$  bicycloalkyl substituted with 0-2  $R^{19}$ ;  
 $R^3$  is a member selected from the group consisting of H and  $C_1$ - $C_4$  alkyl;  
 subscript n is 0 or 1;  
 $R^4$  is a member selected from the group consisting of H and  $C_1$ - $C_6$  alkyl;

alternatively,  $R^2$  and  $R^4$  are taken together to form a  $C_5$ - $C_7$  cycloalkyl substituted with  
 0-2  $R^{19}$ ;  
 $R^5$  is a member selected from the group consisting of H,  $C_3$ - $C_7$  cycloalkyl,  $C_2$ - $C_6$   
 alkenyl,  $C_2$ - $C_6$  alkyne, phenyl substituted with 0-2  $R^{15}$ ; 5- to 6-membered  
 heteroaryl containing 1 to 4 heteroatoms each independently a member  
 selected from the group consisting of N, O and S, wherein said heteroaryl is  
 substituted with 0-2  $R^{15}$ , a  $C_1$ - $C_6$  alkyl substituted with 0-2  $R^{18}$ , wherein said  
 $C_1$ - $C_6$  alkyl optionally contains a heteroatom selected from the group  
 consisting of -O-, -S-, -S(=O)-, -S(=O)<sub>2</sub>- and -NR<sup>17</sup>-;  
 Y is a member independently selected from the group consisting of a bond and  
 -(CR<sup>20</sup>R<sup>21</sup>)<sub>m</sub>-W-(CR<sup>22</sup>R<sup>23</sup>)<sub>p</sub>-;  
 subscript p is 1 or 2;  
 subscript m is 0 or 1;  
 W is a member independently selected from the group consisting of a bond, -O-, -S-,  
 -S(=O)-, -S(=O)<sub>2</sub>- and -NR<sup>12</sup>-;  
 X is selected from the group consisting of -C(=O)-, -OC(=O)-, -NR<sup>24</sup>C(=O)- and  
 -S(=O)<sub>2</sub>-;  
 each of  $R^6$ ,  $R^7$ ,  $R^8$  and  $R^9$  is independently a member selected from the group  
 consisting of H and  $C_1$ - $C_4$  alkyl;  
 alternatively,  $R^5$  and  $R^7$  are taken together to form a  $C_5$ - $C_7$  cycloalkyl substituted with  
 0-2  $R^{19}$ ;  
 alternatively,  $R^5$  and  $R^9$  are taken together to form a 6-7 membered heterocyclic ring  
 containing 1-2 heteroatoms each independently a member selected from the  
 group consisting of N, O and S;  
 Ar is a member selected from the group consisting of phenyl substituted with 0-3  $R^{29}$ ,  
 and 5- to 6-membered heteroaryl containing 1 to 4 heteroatoms each  
 independently a member selected from the group consisting of N, O and S,  
 wherein said heteroaryl is substituted with 0-3  $R^{29}$ ;  
 each  $R^{10}$  is independently a member selected from the group consisting of H,  $C_3$ - $C_7$   
 cycloalkyl, a  $C_1$ - $C_3$  perfluoroalkyl, a  $C_1$ - $C_4$  alkyl substituted with 0-1  $R^{25}$ , a  
 phenyl substituted with 0-3  $R^{15}$ ; a 5- to 6-membered heteroaryl containing 1 to  
 4 heteroatoms each independently a member selected from the group  
 consisting of N, O and S, wherein said heteroaryl is substituted with 0-2  $R^{15}$ ,  
 and a  $C_3$ - $C_8$  heterocycle containing 1 to 2 heteroatoms each independently a

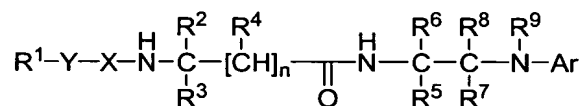
member selected from the group consisting of N, O and S, wherein said  
 heterocycle is substituted with 0-2 R<sup>1c</sup>;  
 each R<sup>11</sup> is independently a member selected from the group consisting of H, 'BOC',  
 Cbz, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, (C<sub>1</sub>-C<sub>6</sub> alkyl)-C(=O)-, (C<sub>1</sub>-C<sub>6</sub> alkyl)-S(=O)<sub>2</sub>- and a  
 C<sub>1</sub>-C<sub>6</sub> alkyl;  
 each of R<sup>12</sup>, R<sup>13</sup> and R<sup>14</sup> is independently a member selected from the group  
 consisting of H and C<sub>1</sub>-C<sub>4</sub> alkyl;  
 alternatively, R<sup>13</sup> and R<sup>14</sup> on the same N atom are taken together to form a C<sub>5</sub>-C<sub>7</sub>  
 heterocycle containing 1-2 heteroatoms each independently a member selected  
 from the group consisting of N, O and S;  
 each R<sup>15</sup> is independently a member selected from the group consisting of H, OH, F,  
 Cl, Br, I, CN, NO<sub>2</sub>, COOR<sup>13</sup>, C(=O)NR<sup>13</sup>R<sup>14</sup>, S(=O)<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>, acetyl, -SCH<sub>3</sub>,  
 -S(=O)CH<sub>3</sub>, -S(=O)<sub>2</sub>CH<sub>3</sub>, NR<sup>26</sup>R<sup>27</sup>, C<sub>1</sub>-C<sub>6</sub> alkoxy, C<sub>1</sub>-C<sub>3</sub> perfluoroalkyl, C<sub>1</sub>-C<sub>3</sub>  
 perfluoroalkoxy and a C<sub>1</sub>-C<sub>6</sub> alkyl;  
 each R<sup>16</sup> is independently a member selected from the group consisting of H, OH,  
 COOR<sup>13</sup>, C(=O)NR<sup>13</sup>R<sup>14</sup>, S(=O)<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>, acetyl, -SCH<sub>3</sub>, -S(=O)CH<sub>3</sub>,  
 -S(=O)<sub>2</sub>CH<sub>3</sub>, C<sub>1</sub>-C<sub>6</sub> alkoxy, NR<sup>26</sup>R<sup>27</sup>, a phenyl substituted with 0-3 R<sup>15</sup>, a 5- to  
 6-membered heteroaryl containing 1 to 4 heteroatoms each independently a  
 member selected from the group consisting of N, O and S, wherein said  
 heteroaryl is substituted with 0-3 R<sup>15</sup>, and a C<sub>3</sub>-C<sub>8</sub> heterocycle containing 1 to  
 2 heteroatoms each independently a member selected from the group  
 consisting of N, O and S, wherein said heterocycle is substituted with 0-2 R<sup>15</sup>  
 and is saturated or unsaturated;  
 R<sup>17</sup> is a member selected from the group consisting of H and C<sub>1</sub>-C<sub>4</sub> alkyl;  
 each R<sup>18</sup> is independently a member selected from the group consisting of H, OH, F,  
 Cl, CN, NO<sub>2</sub>, C(=O)OR<sup>30</sup>, C(=O)NR<sup>13</sup>R<sup>14</sup>, NR<sup>11</sup>R<sup>12</sup>, a C<sub>1</sub>-C<sub>3</sub> perfluoroalkyl, a  
 C<sub>1</sub>-C<sub>3</sub> perfluoroalkoxy, a phenyl substituted with 0-3 R<sup>15</sup>, a 5- to 6-membered  
 heteroaryl containing 1 to 4 heteroatoms each independently a member  
 selected from the group consisting of N, O and S, wherein said heteroaryl is  
 substituted with 0-3 R<sup>15</sup>, a C<sub>3</sub>-C<sub>8</sub> heterocycle containing 1 to 2 heteroatoms  
 each independently a member selected from the group consisting of N, O and  
 S, wherein said heterocycle is substituted with 0-2 R<sup>15</sup> and is saturated or  
 unsaturated; and C<sub>3</sub>-C<sub>8</sub> cycloalkyl;

each R<sup>19</sup> is a independently a member selected from the group consisting of C<sub>1</sub>-C<sub>4</sub>  
 alkyl, F, Cl and C<sub>1</sub>-C<sub>4</sub> alkoxy, CF<sub>3</sub> and OCF<sub>3</sub>;  
 alternatively, two R<sup>19</sup> on the same carbon may be combined to form C<sub>3</sub>-C<sub>6</sub> cycloalkyl;  
 each of R<sup>20</sup>, R<sup>21</sup>, R<sup>22</sup> and R<sup>23</sup> is independently a member selected from the group  
 consisting of a bond, H, F, OH, C<sub>1</sub>-C<sub>4</sub> alkyl, and C<sub>1</sub>-C<sub>3</sub> alkylhydroxy;  
 alternatively, R<sup>20</sup> and R<sup>21</sup> or R<sup>22</sup> and R<sup>23</sup> are taken together to form a C<sub>3</sub>-C<sub>6</sub>  
 cycloalkyl;  
 R<sup>24</sup> is a member selected from the group consisting of H and C<sub>1</sub>-C<sub>4</sub> alkyl;  
 each R<sup>25</sup> is independently a member selected from the group consisting of H, C<sub>3</sub>-C<sub>7</sub>  
 cycloalkyl, a phenyl substituted with 0-3 R<sup>15</sup> and a 5- to 6-membered  
 heteroaryl containing 1 to 4 heteroatoms each independently a member  
 selected from the group consisting of N, O and S, wherein said 5- to 6-  
 membered heteroaryl is substituted with 0-2 R<sup>15</sup>;  
 each R<sup>26</sup> is independently a member selected from the group consisting of H, C<sub>1</sub>-C<sub>4</sub>  
 alkyl, (C<sub>1</sub>-C<sub>4</sub> alkyl)-C(=O)- and (C<sub>1</sub>-C<sub>4</sub> alkyl)-S(=O)<sub>2</sub>-;  
 each R<sup>27</sup> is independently a member selected from the group consisting of H and  
 C<sub>1</sub>-C<sub>4</sub> alkyl;  
 alternatively, R<sup>26</sup> and R<sup>27</sup> on the same N atom are taken together to form a C<sub>5</sub>-C<sub>7</sub>  
 heterocycle containing 1-2 heteroatoms each independently a member selected  
 from the group consisting of N, O and S;  
 each R<sup>28</sup> is independently a member selected from the group consisting of H, a C<sub>1</sub>-C<sub>6</sub>  
 alkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, a phenyl substituted with 0-3 R<sup>15</sup>, a benzyl  
 substituted with 0-2 R<sup>15</sup>;  
 each R<sup>29</sup> is independently a member selected from the group consisting of H, F, Cl,  
 Br, I, CN, NO<sub>2</sub>, OR<sup>28</sup>, SR<sup>28</sup>, S(=O)R<sup>28</sup>, S(=O)<sub>2</sub>R<sup>28</sup>, S(=O)<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>, NR<sup>26</sup>R<sup>27</sup>,  
 acetyl, C(=O)NR<sup>13</sup>R<sup>14</sup>, C(=O)OR<sup>13</sup>, C<sub>1</sub>-C<sub>6</sub> alkyl, OCHF<sub>2</sub>, SCF<sub>3</sub>, OCF<sub>3</sub>, -  
 C(=NH)NH<sub>2</sub>, and 5- to 6-membered heteroaryl containing 1 to 4 heteroatoms  
 each independently a member selected from the group consisting of N, O and  
 S;  
 alternatively, two R<sup>29</sup> substituted on adjacent atoms may be combined to form a 5 to 6  
 membered heterocyclic fused radical, wherein said 5 to 6 membered  
 heterocyclic fused radical comprise 1 or 2 heteroatom(s) selected from O, S  
 and N; wherein said 5 to 6 membered heterocyclic fused radical is substituted  
 with 0-1 oxo;

alternatively, R<sup>29</sup> and R<sup>9</sup> are taken together to form a 5- to 7-membered fused heterocyclic ring containing 1-2 heteroatom(s) each independently a member selected from the group consisting of N, O and S; wherein said 5 to 7 membered fused heterocyclic ring is substituted with 0-2 R<sup>19</sup>;  
each R<sup>30</sup> is independently a member selected from the group consisting of H, C<sub>3</sub>-C<sub>7</sub> cycloalkyl, C<sub>1</sub>-C<sub>4</sub> alkyl substituted with 0-1 R<sup>25</sup>, a phenyl substituted with 0-3 R<sup>15</sup>, and a 5- to 6-membered heteroaryl containing 1 to 4 heteroatoms each independently a member selected from the group consisting of N, O and S, wherein said heteroaryl is substituted with 0-3 R<sup>15</sup>; with the proviso that R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup>, R<sup>8</sup>, and R<sup>9</sup> are not all hydrogen; and  
an exceptent.

**28.** The composition of claim 27, wherein said compound is a member selected from the compounds of Table I.

**29.** A method of selectively inhibiting cathepsin S activity in a mammal in need thereof, comprising administering to said mammal a therapeutically effective amount of a compound of Formula I:



**I**

or a pharmaceutically acceptable salt or prodrug thereof,  
wherein:

R<sup>1</sup> is a member selected from the group consisting of H, C<sub>6</sub>-C<sub>10</sub> aryl substituted with 0-3 R<sup>1a</sup>, a 5- to 6-membered monocyclic or 8- to 10-membered bicyclic heteroaryl containing 1 to 4 heteroatoms each independently a member selected from the group consisting of N, O and S, wherein said heteroaryl is substituted with 0-3 R<sup>1a</sup>, a C<sub>3</sub>-C<sub>8</sub> cycloalkyl substituted with 0-2 R<sup>1b</sup>, wherein said C<sub>3</sub>-C<sub>8</sub> cycloalkyl is saturated or unsaturated; and a C<sub>3</sub>-C<sub>8</sub> heterocycle containing 1 to 2 heteroatoms each independently a member selected from the group consisting of N, O and S, wherein said heterocycle is substituted with 0-2 R<sup>1c</sup> and is saturated or unsaturated;  
each R<sup>1a</sup> is independently a member selected from the group consisting of H, C<sub>1</sub>-C<sub>3</sub> perfluoroalkyl, C<sub>3</sub>-C<sub>7</sub> cycloalkyl, F, Cl, Br, CN, NO<sub>2</sub>, OR<sup>10</sup>, SCH<sub>3</sub>, S(=O)CH<sub>3</sub>,

$S(=O)_2R^{10}$ ,  $NR^{11}R^{12}$ , acetyl,  $C(=O)OR^{13}$ ,  $C(=O)NR^{13}R^{14}$ ,  $S(=O)_2NR^{13}R^{14}$ ,  
 phenyl substituted with 0-3  $R^{15}$ , a 5- to 6-membered monocyclic heteroaryl  
 containing 1 to 4 heteroatoms each independently a member selected from the  
 group consisting of N, O and S, wherein said heteroaryl is substituted with 0-2  
 $R^{15}$ , a  $C_3$ - $C_8$  heterocycle containing 1 to 2 heteroatoms each independently a  
 member selected from the group consisting of N, O and S, wherein said  
 heterocycle is substituted with 0-2  $R^{1c}$  and is saturated or unsaturated, and a  
 $C_1$ - $C_4$  alkyl substituted with 0-2  $R^{16}$ ;  
 each  $R^{1b}$  is independently a member selected from the group consisting of H, OH, F,  
 Cl, acetyl,  $=O$ ,  $C_1$ - $C_6$  alkyl,  $C_1$ - $C_6$  alkoxy,  $CF_3$  and  $OCF_3$ ;  
 each  $R^{1c}$  is independently a member selected from the group consisting of H, OH, F,  
 Cl,  $=O$ ,  $C_1$ - $C_6$  alkyl substituted with 0-2  $R^{16}$ ,  $C_1$ - $C_6$  alkoxy,  $CF_3$ ,  $OCF_3$ ,  
 $C(=O)R^{10}$ ,  $S(=O)_2R^{10}$ , tBoc, Cbz; phenyl substituted with 0-3  $R^{15}$ ; a 5- to 6-  
 membered monocyclic heteroaryl containing 1 to 4 heteroatoms each  
 independently a member selected from the group consisting of N, O and S,  
 wherein said heteroaryl is substituted with 0-2  $R^{15}$ ;  
 $R^2$  is a member selected from the group consisting of a phenyl substituted with 0-3  
 $R^{15}$ , a 5- to 6-membered monocyclic heteroaryl containing 1 to 4 heteroatoms  
 each independently a member selected from the group consisting of N, O and  
 S, wherein said heteroaryl is substituted with 0-2  $R^{15}$ , a  $C_1$ - $C_6$  alkyl substituted  
 with 0-2  $R^{2a}$ , wherein said  $C_1$ - $C_6$  alkyl optionally contains a heteroatom  
 selected from the group consisting of  $-O-$ ,  $-S-$ , and  $-S(=O)_2-$ , a  $C_2$ - $C_6$  alkenyl,  
 a  $C_2$ - $C_6$  alkynyl, a  $C_3$ - $C_7$  cycloalkyl substituted with 0-2  $R^{19}$ , wherein said  $C_3$ -  
 $C_7$  cycloalkyl optionally contains a heteroatom selected from  $-O-$ ,  $-S-$ , and  $-$   
 $S(=O)_2-$ , and a  $C_7$ - $C_{11}$  bicycloalkyl substituted with 0-2  $R^{19}$ ;  
 each  $R^{2a}$  is independently a member selected from the group consisting of a  $C_6$ - $C_{10}$   
 aryl substituted with 0-3  $R^{15}$ , a 5- to 6-membered monocyclic or 8- to 10-  
 membered bicyclic heteroaryl containing 1 to 4 heteroatoms each  
 independently a member selected from the group consisting of N, O and S,  
 wherein said heteroaryl is substituted with 0-3  $R^{15}$ , a  $C_3$ - $C_8$  cycloalkyl  
 substituted with 0-2  $R^{19}$ , and a  $C_7$ - $C_{11}$  bicycloalkyl substituted with 0-2  $R^{19}$ ;  
 $R^3$  is a member selected from the group consisting of H and  $C_1$ - $C_4$  alkyl;  
 subscript n is 0 or 1;  
 $R^4$  is a member selected from the group consisting of H and  $C_1$ - $C_6$  alkyl;

alternatively,  $R^2$  and  $R^4$  are taken together to form a  $C_5$ - $C_7$  cycloalkyl substituted with  
 0-2  $R^{19}$ ;  
 $R^5$  is a member selected from the group consisting of H,  $C_3$ - $C_7$  cycloalkyl,  $C_2$ - $C_6$   
 alkenyl,  $C_2$ - $C_6$  alkyne, phenyl substituted with 0-2  $R^{15}$ ; 5- to 6-membered  
 heteroaryl containing 1 to 4 heteroatoms each independently a member  
 selected from the group consisting of N, O and S, wherein said heteroaryl is  
 substituted with 0-2  $R^{15}$ , a  $C_1$ - $C_6$  alkyl substituted with 0-2  $R^{18}$ , wherein said  
 $C_1$ - $C_6$  alkyl optionally contains a heteroatom selected from the group  
 consisting of -O-, -S-, -S(=O)-, -S(=O)<sub>2</sub>- and -NR<sup>17</sup>-;  
 Y is a member independently selected from the group consisting of a bond and  
 -(CR<sup>20</sup>R<sup>21</sup>)<sub>m</sub>-W-(CR<sup>22</sup>R<sup>23</sup>)<sub>p</sub>-;  
 subscript p is 1 or 2;  
 subscript m is 0 or 1;  
 W is a member independently selected from the group consisting of a bond, -O-, -S-,  
 -S(=O)-, -S(=O)<sub>2</sub>- and -NR<sup>12</sup>-;  
 X is selected from the group consisting of -C(=O)-, -OC(=O)-, -NR<sup>24</sup>C(=O)- and  
 -S(=O)<sub>2</sub>-;  
 each of  $R^6$ ,  $R^7$ ,  $R^8$  and  $R^9$  is independently a member selected from the group  
 consisting of H and  $C_1$ - $C_4$  alkyl;  
 alternatively,  $R^5$  and  $R^7$  are taken together to form a  $C_5$ - $C_7$  cycloalkyl substituted with  
 0-2  $R^{19}$ ;  
 alternatively,  $R^5$  and  $R^9$  are taken together to form a 6-7 membered heterocyclic ring  
 containing 1-2 heteroatoms each independently a member selected from the  
 group consisting of N, O and S;  
 Ar is a member selected from the group consisting of phenyl substituted with 0-3  $R^{29}$ ,  
 and 5- to 6-membered heteroaryl containing 1 to 4 heteroatoms each  
 independently a member selected from the group consisting of N, O and S,  
 wherein said heteroaryl is substituted with 0-3  $R^{29}$ ;  
 each  $R^{10}$  is independently a member selected from the group consisting of H,  $C_3$ - $C_7$   
 cycloalkyl, a  $C_1$ - $C_3$  perfluoroalkyl, a  $C_1$ - $C_4$  alkyl substituted with 0-1  $R^{25}$ , a  
 phenyl substituted with 0-3  $R^{15}$ ; a 5- to 6-membered heteroaryl containing 1 to  
 4 heteroatoms each independently a member selected from the group  
 consisting of N, O and S, wherein said heteroaryl is substituted with 0-2  $R^{15}$ ,  
 and a  $C_3$ - $C_8$  heterocycle containing 1 to 2 heteroatoms each independently a

member selected from the group consisting of N, O and S, wherein said  
 heterocycle is substituted with 0-2 R<sup>1c</sup>;  
 each R<sup>11</sup> is independently a member selected from the group consisting of H, 'BOC,  
 Cbz, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, (C<sub>1</sub>-C<sub>6</sub> alkyl)-C(=O)-, (C<sub>1</sub>-C<sub>6</sub> alkyl)-S(=O)<sub>2</sub>- and a  
 C<sub>1</sub>-C<sub>6</sub> alkyl;  
 each of R<sup>12</sup>, R<sup>13</sup> and R<sup>14</sup> is independently a member selected from the group  
 consisting of H and C<sub>1</sub>-C<sub>4</sub> alkyl;  
 alternatively, R<sup>13</sup> and R<sup>14</sup> on the same N atom are taken together to form a C<sub>5</sub>-C<sub>7</sub>  
 heterocycle containing 1-2 heteroatoms each independently a member selected  
 from the group consisting of N, O and S;  
 each R<sup>15</sup> is independently a member selected from the group consisting of H, OH, F,  
 Cl, Br, I, CN, NO<sub>2</sub>, COOR<sup>13</sup>, C(=O)NR<sup>13</sup>R<sup>14</sup>, S(=O)<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>, acetyl, -SCH<sub>3</sub>,  
 -S(=O)CH<sub>3</sub>, -S(=O)<sub>2</sub>CH<sub>3</sub>, NR<sup>26</sup>R<sup>27</sup>, C<sub>1</sub>-C<sub>6</sub> alkoxy, C<sub>1</sub>-C<sub>3</sub> perfluoroalkyl, C<sub>1</sub>-C<sub>3</sub>  
 perfluoroalkoxy and a C<sub>1</sub>-C<sub>6</sub> alkyl;  
 each R<sup>16</sup> is independently a member selected from the group consisting of H, OH,  
 COOR<sup>13</sup>, C(=O)NR<sup>13</sup>R<sup>14</sup>, S(=O)<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>, acetyl, -SCH<sub>3</sub>, -S(=O)CH<sub>3</sub>,  
 -S(=O)<sub>2</sub>CH<sub>3</sub>, C<sub>1</sub>-C<sub>6</sub> alkoxy, NR<sup>26</sup>R<sup>27</sup>, a phenyl substituted with 0-3 R<sup>15</sup>, a 5- to  
 6-membered heteroaryl containing 1 to 4 heteroatoms each independently a  
 member selected from the group consisting of N, O and S, wherein said  
 heteroaryl is substituted with 0-3 R<sup>15</sup>, and a C<sub>3</sub>-C<sub>8</sub> heterocycle containing 1 to  
 2 heteroatoms each independently a member selected from the group  
 consisting of N, O and S, wherein said heterocycle is substituted with 0-2 R<sup>15</sup>  
 and is saturated or unsaturated;  
 R<sup>17</sup> is a member selected from the group consisting of H and C<sub>1</sub>-C<sub>4</sub> alkyl;  
 each R<sup>18</sup> is independently a member selected from the group consisting of H, OH, F,  
 Cl, CN, NO<sub>2</sub>, C(=O)OR<sup>30</sup>, C(=O)NR<sup>13</sup>R<sup>14</sup>, NR<sup>11</sup>R<sup>12</sup>, a C<sub>1</sub>-C<sub>3</sub> perfluoroalkyl, a  
 C<sub>1</sub>-C<sub>3</sub> perfluoroalkoxy, a phenyl substituted with 0-3 R<sup>15</sup>, a 5- to 6-membered  
 heteroaryl containing 1 to 4 heteroatoms each independently a member  
 selected from the group consisting of N, O and S, wherein said heteroaryl is  
 substituted with 0-3 R<sup>15</sup>, a C<sub>3</sub>-C<sub>8</sub> heterocycle containing 1 to 2 heteroatoms  
 each independently a member selected from the group consisting of N, O and  
 S, wherein said heterocycle is substituted with 0-2 R<sup>15</sup> and is saturated or  
 unsaturated; and C<sub>3</sub>-C<sub>8</sub> cycloalkyl;



each R<sup>19</sup> is a independently a member selected from the group consisting of C<sub>1</sub>-C<sub>4</sub>  
 alkyl, F, Cl and C<sub>1</sub>-C<sub>4</sub> alkoxy, CF<sub>3</sub> and OCF<sub>3</sub>;  
 alternatively, two R<sup>19</sup> on the same carbon may be combined to form C<sub>3</sub>-C<sub>6</sub> cycloalkyl;  
 each of R<sup>20</sup>, R<sup>21</sup>, R<sup>22</sup> and R<sup>23</sup> is independently a member selected from the group  
 consisting of a bond, H, F, OH, C<sub>1</sub>-C<sub>4</sub> alkyl, and C<sub>1</sub>-C<sub>3</sub> alkylhydroxy;  
 alternatively, R<sup>20</sup> and R<sup>21</sup> or R<sup>22</sup> and R<sup>23</sup> are taken together to form a C<sub>3</sub>-C<sub>6</sub>  
 cycloalkyl;  
 R<sup>24</sup> is a member selected from the group consisting of H and C<sub>1</sub>-C<sub>4</sub> alkyl;  
 each R<sup>25</sup> is independently a member selected from the group consisting of H, C<sub>3</sub>-C<sub>7</sub>  
 cycloalkyl, a phenyl substituted with 0-3 R<sup>15</sup> and a 5- to 6-membered  
 heteroaryl containing 1 to 4 heteroatoms each independently a member  
 selected from the group consisting of N, O and S, wherein said 5- to 6-  
 membered heteroaryl is substituted with 0-2 R<sup>15</sup>;  
 each R<sup>26</sup> is independently a member selected from the group consisting of H, C<sub>1</sub>-C<sub>4</sub>  
 alkyl, (C<sub>1</sub>-C<sub>4</sub> alkyl)-C(=O)- and (C<sub>1</sub>-C<sub>4</sub> alkyl)-S(=O)<sub>2</sub>-;  
 each R<sup>27</sup> is independently a member selected from the group consisting of H and  
 C<sub>1</sub>-C<sub>4</sub> alkyl;  
 alternatively, R<sup>26</sup> and R<sup>27</sup> on the same N atom are taken together to form a C<sub>5</sub>-C<sub>7</sub>  
 heterocycle containing 1-2 heteroatoms each independently a member selected  
 from the group consisting of N, O and S;  
 each R<sup>28</sup> is independently a member selected from the group consisting of H, a C<sub>1</sub>-C<sub>6</sub>  
 alkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, a phenyl substituted with 0-3 R<sup>15</sup>, a benzyl  
 substituted with 0-2 R<sup>15</sup>;  
 each R<sup>29</sup> is independently a member selected from the group consisting of H, F, Cl,  
 Br, I, CN, NO<sub>2</sub>, OR<sup>28</sup>, SR<sup>28</sup>, S(=O)R<sup>28</sup>, S(=O)<sub>2</sub>R<sup>28</sup>, S(=O)<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>, NR<sup>26</sup>R<sup>27</sup>,  
 acetyl, C(=O)NR<sup>13</sup>R<sup>14</sup>, C(=O)OR<sup>13</sup>, C<sub>1</sub>-C<sub>6</sub> alkyl, OCHF<sub>2</sub>, SCF<sub>3</sub>, OCF<sub>3</sub>, -  
 C(=NH)NH<sub>2</sub>, and 5- to 6-membered heteroaryl containing 1 to 4 heteroatoms  
 each independently a member selected from the group consisting of N, O and  
 S;  
 alternatively, two R<sup>29</sup> substituted on adjacent atoms may be combined to form a 5 to 6  
 membered heterocyclic fused radical, wherein said 5 to 6 membered  
 heterocyclic fused radical comprise 1 or 2 heteroatom(s) selected from O, S  
 and N; wherein said 5 to 6 membered heterocyclic fused radical is substituted  
 with 0-1 oxo;

154 alternatively, R<sup>29</sup> and R<sup>9</sup> are taken together to form a 5- to 7-membered fused  
155 heterocyclic ring containing 1-2 heteroatom(s) each independently a member  
156 selected from the group consisting of N, O and S; wherein said 5 to 7  
157 membered fused heterocyclic ring is substituted with 0-2 R<sup>19</sup>;  
158 each R<sup>30</sup> is independently a member selected from the group consisting of H, C<sub>3</sub>-C<sub>7</sub>  
159 cycloalkyl, C<sub>1</sub>-C<sub>4</sub> alkyl substituted with 0-1 R<sup>25</sup>, a phenyl substituted with 0-3  
160 R<sup>15</sup>, and a 5- to 6-membered heteroaryl containing 1 to 4 heteroatoms each  
161 independently a member selected from the group consisting of N, O and S,  
162 wherein said heteroaryl is substituted with 0-3 R<sup>15</sup>; and  
163 with the proviso that R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup>, R<sup>8</sup>, and R<sup>9</sup> are not all hydrogen.

1 30. The method of claim 29, wherein the cathepsin S inhibition constant  
2 for a compound of Formula I is less than 10 μM.

1 31. The method of claim 30, wherein the cathepsin S inhibition constant  
2 for a compound of Formula I is less than 1.0 μM.

1 32. The method of claim 31, wherein the cathepsin S inhibition constant  
2 for a compound of Formula I is less than 0.1 μM.

1 33. The method of claim 29, wherein cathepsin S is selectively inhibited in  
2 the presence of at least one other cathepsin.

1 34. The method of claim 33, wherein the inhibition constant of a  
2 compound of Formula I for said at least one other cathepsin is at least 10 times greater than a  
3 cathepsin S inhibition constant of a compound of Formula I.

1 35. The method of claim 34, wherein the inhibition constant of a  
2 compound of Formula I for said at least one other cathepsin is at least 100 times greater than  
3 said cathepsin S inhibition constant of a compound of Formula I.

1 36. The method of claim 35, wherein the inhibition constant of a  
2 compound of Formula I for said at least one other cathepsin is at least 1000 times greater than  
3 said cathepsin S inhibition constant of a compound of Formula I.

1                    **37.**     The method of claim **29**, wherein said compound is a member selected  
2     from the compounds of Table I.